

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

- a' 1. (Currently amended) A personal identification apparatus comprising:
a storage device configured to store specific information pieces of each of a plurality of registered persons in order;
an extraction device configured to extract a specific information piece of an object person to be identified from a feature of the object person;
~~a classification~~ an identification device configured to ~~classify whether~~ identify the object person ~~is included in~~ from the registered persons by comparing the specific information pieces of the registered persons, ~~which is stored in said storage device~~, with the specific information piece of the object person, ~~which is extracted by said extraction device~~; and
a registered information operation device configured to sort ~~an arrangement order of pieces of in the order~~ the specific information pieces of the registered persons, ~~which is stored in said storage device, in accordance with a use situation of the registered persons, or set whether the registered persons are to be subjected to classification~~ (an elapse time from a last identification of the object person or a frequency of identification thereof)
2. (Canceled)
3. (Currently amended) [[An]] The apparatus according to claim 1, wherein when said ~~classification~~ identification device fails the ~~classification~~ identification between the object person and each of the registered persons, said ~~classification~~ identification device executes retry using the specific information piece of the object person which is extracted by said extraction device.
4. (Currently amended) [[An]] The apparatus according to claim 1, wherein when said ~~classification~~ identification device fails ~~classification~~ identification between the object

person and one of the registered persons, said extraction device extracts another specific information piece of the object person which ~~differs from~~ presents at a lower-order position than the specific information piece extracted from the object person, and said ~~classification~~ identification device compares the another specific information piece with the specific information piece of each of the registered persons to verify the specific information piece.

5. (Currently amended) [[An]] The apparatus according to claim 1, wherein when said ~~classification~~ identification device fails ~~classification~~ identification between the object person and each of the registered persons, said ~~classification~~ identification device executes retry using the specific information piece of the object person extracted by said extraction device and the specific information piece of each of the registered persons stored in said storage device.

6. (Currently amended) [[An]] The apparatus according to claim 1, wherein said extraction device comprises a face region detector device configured to detect a face region of the object person as the specific information piece of the object person, a facial part detector configured to detect facial parts of the object person based on face region image information obtained by said face region detector device, and a feature extraction device configured to extract a feature of the object person based on grayscale information which is extracted for each pixel from the face region based on positional information of the facial parts.

7. (Currently amended) [[An]] The apparatus according to claim 1, wherein said storage device stores respective personal information pieces including the specific information piece of the registered person, the dictionary, name of the registered person, registration number, registration date when these ~~pieces of~~ information pieces are stored in said storage device, and date/time and place of identification of the registered person.

8. (Currently amended) [[An]] The apparatus according to claim 1, which comprises a presentation device configured to present the information pieces stored in said storage

device together with an order in which ~~pieces~~ of the information pieces are stored in said storage device.

9. (Currently amended) [[An]] The apparatus according to claim 1, wherein said registered information operation device sorts and updates information pieces read out from said storage device in accordance with any condition and sends sorted information to said storage device to store it therein.

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10. (Currently amended) [[An]] The apparatus according to claim 1, wherein said registered information operation device comprises a control determination device configured to determine a sorting method for the information pieces stored in said storage device, compute a time required for determination of sorting, and change items of the information, and a sorting device configured to sort ~~pieces~~ of the information pieces in accordance with ~~the reference designated~~ a sorting method determined by said control determination device to ~~change the order of pieces of the registered information,~~ and transmit the sorted information pieces to said registered information storage device.

11. (Currently amended) [[An]] The apparatus according to claim 10, wherein said sorting device sorts the ~~pieces~~ of information pieces, which are arranged first in the a registration order ~~of registration number,~~ in the an ascending order of elapse times from the last ~~classification~~ identification of the object person and registered persons ~~by means of said classification device.~~

12. (Currently amended) [[An]] The apparatus according to claim 10, wherein said sorting device sorts automatically the ~~pieces~~ of information pieces at a predetermined time interval.

13. (Currently amended) [[An]] The apparatus according to claim 10, wherein said sorting device performs automatically the sorting when ~~classification~~ identification between the registered persons and the object person has been executed.

14. (Currently amended) [[An]] The apparatus according to claim 10, wherein said sorting device performs the sorting in accordance with request of an administrator.

15. (Currently amended) ~~[[An]]~~ The apparatus according to claim 1, wherein said registered information operation device includes a selector configured to select appropriately the ~~pieces of~~ registered person information pieces stored in said storage device depending on whether they are information to be identified.

a' 16. (Currently amended) ~~[[An]]~~ The apparatus according to claim 1, wherein said storage device stores face information of the registered persons as the specific information pieces of the registered persons, said extraction device extracts the face information of the object person as the specific information piece of the object person, said ~~classification~~ identification device includes an ID reader configured to read the registered information pieces and identifies the object person by computing a similarity between the face information extracted by said extraction device and face information corresponding to the registered persons stored in said storage device.

17. (Currently amended) ~~[[An]]~~ The apparatus according to claim 1, wherein said ~~classification~~ identification device performs verification for only ~~pieces of~~ information pieces at higher-order positions in accordance with the order of sorted information pieces.

18. (Currently amended) ~~[[An]]~~ The apparatus according to claim 17, wherein said ~~classification~~ identification device performs retry by comparing information present at a lower-order position in said storage device with the specific information piece of the object person when said ~~classification~~ identification device fails verification between the specific information pieces stored in said storage device and the specific information piece extracted by said extraction device.

19. (Currently amended) ~~[[An]]~~ The apparatus according to claim 17, wherein said ~~classification~~ identification device calculates a similarity between each of a given number of ~~pieces of~~ information pieces read out from said storage device and the specific information piece of the object person to obtain a plurality of similarities, and selects a maximum similarity from the similarities to obtain a ~~classification~~ an identification result.

20. (Currently amended) [[An]] The apparatus according to claim 1, wherein said classification device performs comparison for selected pieces of the sorted information in accordance with the order of the sorted information.

21. (Currently amended) [[An]] The apparatus according to claim 20, wherein said ~~classification~~ identification device computes a similarity between each of ~~pieces of~~ information pieces which are selected by a flag and read out from said storage device and the specific information piece of the object person and outputs a ~~piece of~~ information piece having a maximum similarity as a ~~classification~~ an identification result.

22. (Currently amended) [[An]] The apparatus according to claim 17, wherein said ~~classification~~ identification device performs retry by collating a feature extracted newly by said extraction device with each of features of the specific information pieces read out from said storage device when said ~~classification~~ identification device fails verification between the specific information pieces stored in said storage device and the specific information piece extracted by said extraction device.

23. (Currently amended) A personal identification apparatus comprising:
a storage device configured to store a dictionary including ~~pieces of~~ specific information pieces of a plurality of registered persons which are arranged in a given order;
an extraction device configured to extract a specific information piece from an object person;

~~a classification~~ an identification device configured to classify whether the object person is a registered person by comparing the specific information piece of the object person with the specific information pieces contained in said dictionary; and

a registered information operation device configured to sort the ~~pieces of~~ information pieces contained in said dictionary in accordance with ~~a use situation of the registered person~~ or limit the object person an elapse time from a last identification of the object person or a frequency of identification thereof.

24. (Currently amended) A personal identification method comprising:

storing specific information pieces of ~~each of a plurality of~~ registered persons in order
in a storage device;

extracting a specific information piece of an object person from the object person;

~~classifying whether identifying the object person is included in the registered persons~~
by comparing ~~pieces of the~~ specific information pieces of the registered persons, ~~which are~~
~~stored in the storage device,~~ with the specific information piece of the object person, ~~which is~~
~~extracted in the extracting step;~~ and

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~~sorting an order of the pieces of~~ specific information pieces of the registered persons;
~~which are stored in the storage device, in accordance with a use situation of the registered~~
~~persons, or setting whether the registered persons are to be subjected to classification an~~
elapse time from a last identification of the object person or a frequency of identification
thereof.

25. (Canceled)

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26. (Currently amended) [[A]] The method according to claim 24, wherein which
includes, when ~~classification the identifying fails in the classifying step,~~ performing retry
operation of the identifying is performed using the specific information piece of the object
person, ~~which is extracted in the extracting step,~~ or another specific information piece of the
object person, ~~which is different from presents at a lower-order position than~~ the specific
information extracted for the object person from the object person, ~~is extracted, and the~~
~~extracted specific information of the object person is compared with the specific information~~
~~of each of the registered persons, which is stored in the storage device.~~

27. (Canceled)